

Light-curve synthesis for close binaries overfilling their inner Roche lobes

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Abstract

We present a procedure for calculating theoretical monochromatic light curves of close binary systems overfilling their inner Roche lobes. The close binaries are considered in a Roche model with a cold spot on one of the components. The system radiation is calculated in both a blackbody approximation and using model stellar atmospheres, taking into account tidal deformations of the components, limb darkening, gravitational darkening, and the effect of mutual heating of the components. © 2002 MAIK "Nauka/Interperiodica".

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